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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,859	09/17/2003	Kyung-Seok Byun	1572.1191	2861

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EXAMINER

KRAUSE, JUSTIN MITCHELL

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,859

Applicant(s)

BYUN, KYUNG-SEOK

Examiner

Justin Krause

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-25 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 and 17-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9-16 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/17/03,3/31/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species 1 in the reply filed on March 3, 2006 is acknowledged.
2. Claims 2 is cancelled, claims 8 and 9 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 3, 2006. The Examiner further withdraws claims 7 and 17-24 as being drawn to a non-elected species. Claims 7 and 17-24 are drawn to an apparatus having two transporting tables, whereas the elected embodiment only discloses a single transporting table.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

US Patent 5,647,724 in paragraph 0004 of the specification is not listed on any Information Disclosure Statement.

Specification

4. The disclosure is objected to because of the following informalities: paragraph 0041 refers to "the engaging device" as both reference numbers 32 and 30.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3-6 and 10-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "a reciprocating direction" which is reversible and therefore unclear which direction is being referred to and "behind the first driving axle in the reciprocating direction" which is unclear what direction "behind" is due to the reversible nature of the reciprocating direction and is dependent upon what vantage point the viewer is observing the device from.

In claim 12, "the links" lacks antecedent basis.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, 10-12 and 25, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa et al (US Patent 5,950,495 now US RE37,731).

Ogawa discloses a transporting apparatus comprising:

- A supporting part (1)
- first and second driving axles (O_1 and O_2)
- a plurality of driving links (32, 12, 33, 13)
- a plurality of transporting links (36, 37, 16, 17) rotatably connected to the driving links
- a transporting table (22) rotatably connected to the transporting linked by pivots (O_5) to reciprocate, the first and second driving axles being aligned in a reciprocating direction,

wherein the first driving axle (O_2) is passed through a center of the supporting part and the second driving axle (O_1) is eccentrically passed through the supporting part behind the first driving axle in the reciprocating direction.

Regarding claim 3, the pivots connecting the transporting links to the transporting table are aligned in the reciprocating direction of the transporting table.

Regarding claim 10, the links are connected to the first and second driving axles and are different in height (see figure 3).

Regarding claim 11, the pivots allow the first and second driving axles to rotate in opposite directions.

Regarding claim 12, the links are symmetrically rotated according to the rotation of the first and second driving axles.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Mitsuyoshi (US 2001/0004852).

Ogawa discloses all of the claimed subject matter as described above, but does not disclose an engaging device or groove parts.

Mitsuyoshi teaches an engaging device (described in paragraph 0054) linking drive shaft R1 and driven shaft R2, so that the first and second driving axles rotate reversely with respect to each other (paragraph 0015) for the purpose of continuously transferring subject objects by alternately operating the folding and stretching of the transfer arms (Paragraph 0016).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Ogawa and incorporate an engaging device as taught by Mitsuyoshi so that the first and second driving axles rotate reversely with respect to each other, the motivation would have been of continuously

transferring subject objects by alternately operating the folding and stretching of the transfer arms.

Regarding claim 6, Mitsuyoshi discloses the driving links provided with groove parts (as shown in figures 1 and 2) to avoid interference.

11. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Mitsuyoshi and in further view of Sato et al (US Patent 5,857,826).

Ogawa discloses all of the claimed subject matter as described above, including 3 motors (8-10).

Mitsuyoshi, as described above, teaches that it is known to use a single motor to drive a first and second axle.

Sato teaches a transporting apparatus with a plurality of motors (2a-4a, 8a) for driving the arms of the apparatus, rotating the device (figs 12 and 13) and adjusting the height (motor 8a) to perform different steps of a semiconductor processing operation.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Ogawa, Mitsuyoshi and Sato and create a device with a first motor to drive the axles, a second motor to rotate the supporting part and a third motor to control vertical movement to allow the device to perform different steps in a processing operation. The device of Ogawa is capable of performing the functions as claimed. The modifications are a matter of combining old and well known concepts into a single device.

Examiner Note A more positive recitation of the structural relationships claimed could make this claim allowable over the prior art.

Perhaps language such as -- a first motor, wherein said first motor drives...--, --a second motor, wherein said second motor drives...--, a third motor, wherein said third motor...--

Regarding claim 14, one of the first and second driving axles is indirectly driven by the first motor.

Regarding claim 15, the supporting shaft and one of the first and second driving axles are provided concentrically (see Sato Fig 2, Ogawa Fig 4).

12. Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, Mitsuyoshi and Sato as applied to claim 13 above, and further in view of Solomon et al (US Patent 5,775,169).

Ogawa discloses magnet fluid seals (5-7) for maintaining a vacuum condition in the base member and the feed through of shafts 2-4.

Solomon teaches a bellows (75) which allows the assembly to move vertically via a lifting mechanism (Col 3, line 60).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Ogawa, Mitsuyoshi and Sato, and incorporate a bellows as taught by Solomon to facilitate vertical movement with the use of a lifting mechanism.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMK
5/17/06



RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER